

Preliminary Amendment  
New U.S. Patent Application

7. An abrasive flap disc as claimed in claim 1, wherein the centerline of each flap, which extends between its radially inner and outer edges, is at an angle relative to a radius of the backing plate.

10. An abrasive flap disc as claimed in claim 1, wherein the flaps comprise abrasive grit bonded to a backing material.

11. An abrasive flap disc as claimed in claim 1, wherein the backing plate includes means to attach the disc to a drive mechanism.

12. A method of producing an abrasive flap disc of the type set out in claim 1, comprising the steps of:

providing a backing plate;

providing an adhesive on an upper surface of the backing plate;

rotating the backing plate incrementally;

at each incremental step, feeding the end of a strip of abrasive material on to the adhesive on the backing plate;

severing the end of the strip to form a flap;

repeating the process until an annular array of flaps is formed on the backing plate with each flap, at least in a radially outer region, being spaced from each adjacent flap;

maintaining the flaps in spaced position; and

curing the adhesive to secure the flaps to the backing plate.

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13. A method of producing an abrasive flap disc as claimed in claim 12, wherein after constructing the array of flaps and before curing, the method further includes the step of placing the disc in a former adapted to prevent each flap from falling into substantial contact with an adjacent flap.

14. A method of producing an abrasive flap disc as claimed in claim 13, wherein the former includes a cylindrical wall dimensioned to encircle the disc and prevent each flap from falling into substantial contact with an adjacent flap.

15. A method of producing an abrasive flap disc as claimed in claim 13, wherein a spoke-shaped frame is placed with a spoke positioned between adjacent flaps to prevent each flap from falling into substantial contact with an adjacent flap.

16. A method of producing an abrasive flap disc as claimed in claim 12, comprising the step of feeding the strip of abrasive material such that each flap has a centerline extending from its radially inner to outer edge and which is substantially on a centerline of the backing plate.

17. A method of producing an abrasive flap disc as claimed in claim 12, comprising the step of feeding the strip of abrasive material such that each flap has a centerline extending from its radially inner to outer edge and which is at an angle relative to a radius of the backing plate.

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Please add new claims 18-20 as follows:

- 18. A method of producing an abrasive flap disc, comprising the steps of:  
providing a backing plate;  
providing an adhesive on an upper surface of the backing plate;  
rotating the backing plate incrementally;  
at each incremental step, feeding the end of a strip of abrasive material on to the adhesive on the backing plate;  
severing the end of the strip to form a flap;  
repeating the process until an annular array of flaps is formed on the backing plate  
with each flap, at least in a radially outer region, being spaced from each adjacent flap;  
maintaining the flaps in spaced position; and  
curing the adhesive to secure the flaps to the backing plate.
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19. A method of producing an abrasive flap disc as claimed in claim 18, wherein after constructing the array of flaps and before curing, the method further includes the step of placing the disc in a former adapted to prevent each flap from falling into substantially contact with an adjacent flap.
20. A method of producing an abrasive flap disc as claimed in claim 18, comprising the step of feeding the strip of abrasive material such that each flap has a centerline extending from its radially inner to outer edge and which is at an angle relative to a radius of the backing plate--